Panasonic

VHS-Compact Movie

NV-M400PX

Operating Instructions

VHSC

Before attempting to connect, operate or adjust this product, please read these instructions completely.

VQT3766

IMPORTANT

Your attention is drawn to the fact that recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

FOR YOUR SAFETY

■ **DO NOT REMOVE OUTER COVER.**

To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

Information for your safety.

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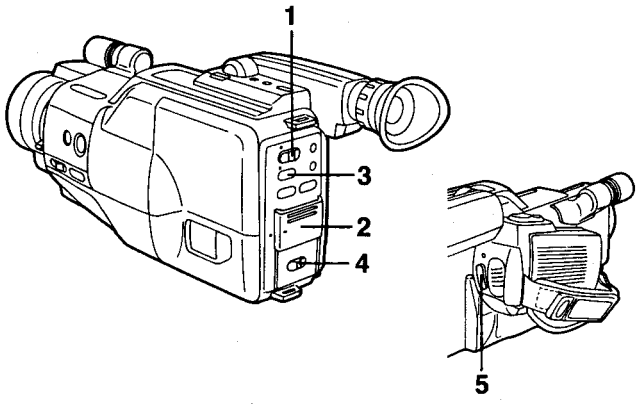
HQ (High quality) Picture System

Video recorders carrying the HQ symbol mark feature the new VHS High Quality Picture System. This system assures complete compatibility with VTRs that use the conventional VHS system.

ENGLISH

Camera Recording



1 Turn the Movie Camera on.

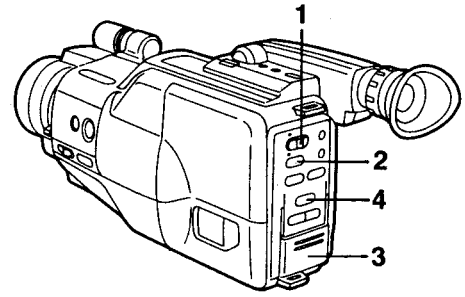
2 Set the Camera/VCR Selector Cover to "CAMERA REC".

3 Insert a Video Cassette.

4 Set the Recording Speed Selector to "SP" or "SLP".

5 Press the Start/Stop Button.
- Recording starts.
- Press this button again to stop recording.

Playback



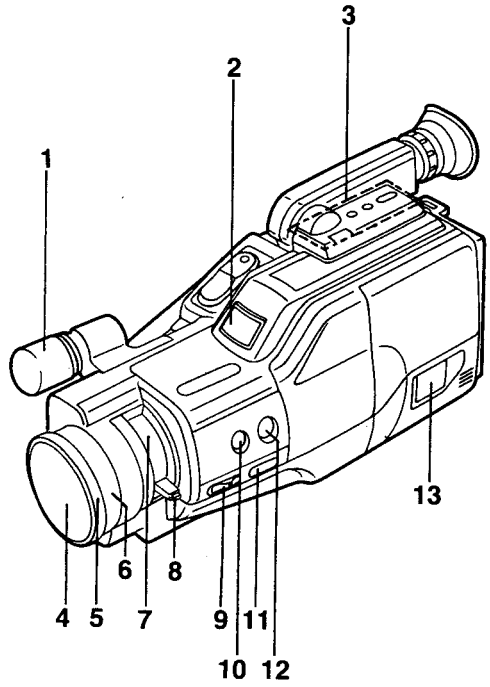
1 Turn the Movie Camera on.

2 Insert the recorded cassette.

3 Set the Camera/VCR Selector Cover to "VCR PLAY".

4 Press the Play Button.
- Playback starts.
- Press the Stop Button to stop playback.

Controls and Components



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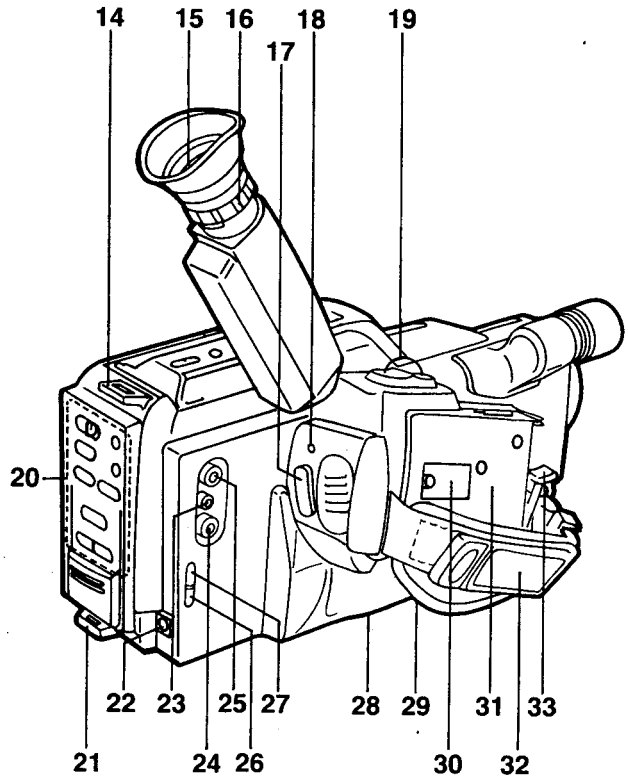

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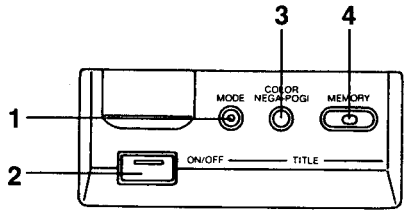
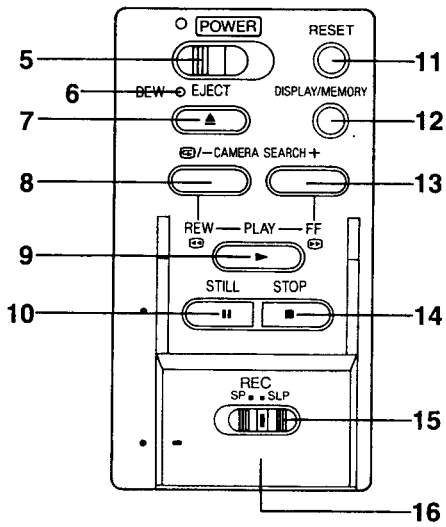
3 Top Panel Controls



20 General Operation Controls



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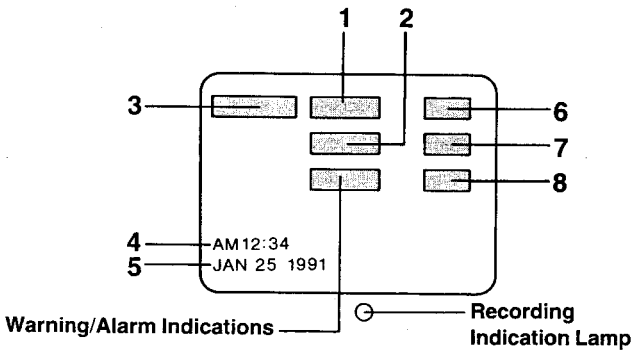
16 Function of the Camera/VCR Selector Cover

Closed ..... For camera recording.
Open (as illustrated) ..... For other operations than camera recording.

Indications in the Electronic Viewfinder (EVF)

The following indications are displayed in the Electronic Viewfinder (EVF) to inform you of the conditions of the Movie Camera.



Warning/Alarm Indications

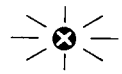
There is little battery power left. Movie Camera will be turned off in a few minutes. Replace the battery pack by a fully recharged one.

It is impossible to record because the erasure prevention tab of the cassette is not intact.

END

During recording, the tape has almost reached its end. Replace the tape with a new one. The indication will remain lit when the tape has reached its end.

When condensation has formed inside the Movie Camera, the "DEW" indication will flash and a few seconds later, the unit itself off.



Video Head Clogging (See page 32.)

When the Battery for Title Function is not inserted, the indication will flash for 10 seconds after the Movie Camera is turned on.

1 Remaining Battery Power Indication

E---F The "▬" indications begin to disappear from right to left as the power of the Battery Pack weakens.

2 Counter Indication

M0501 Tape Counter

1:23 Lap Time Counter

3 Digital Memory Indication

WHT Color Indication

WIPE ↑ Mode Indication (No indication in normal mode.)

4 Time Indication

5 Date Indication

6 Tape Running Indications

REC Recording mode

PAUSE Recording Pause mode, Rec Review

▷ Play mode, Camera Search (In forward direction)

❚❚ Still mode

▷▷ Fast Forward/Cue mode

◁◁ Rewind/Review mode, Camera Search (In reverse direction)

7 Recording Mode Indications

SP SP mode

SLP SLP mode

8 High Speed Shutter Mode Indications

1/500 1/500 sec.

1/1000 1/1000 sec.

- Some of the above indications may light up alternately at the same place in the EVF to indicate the corresponding operating condition or warnings.

Accessories

Standard Accessories

AC Adaptor
Battery Pack
RF Adaptor
Shoulder Strap
System Carrying Case
VHS-C Video Cassette
Cassette Adaptor
AV Output Cable
RF Cable
Battery for Clock Operation
DC Input Cable
Battery for Cassette Adaptor Operation
Battery for Title Function
Power Plug Adaptor (VJP1005)

Optional Accessory

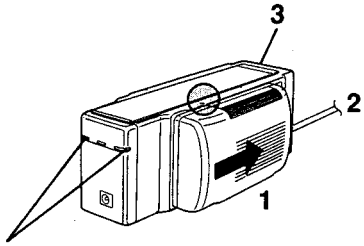
Car Battery Cord (VW-ACC5)

Information for your safety.

CAUTION: TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

Battery Pack

Charging



Charging Indicator Lamps

1 Attach the Battery Pack.
(Align the "▬" marks and slide the Battery Pack in the direction of the arrow.)

2 Connect the AC Adaptor to the Mains.

3 Turn the power on.

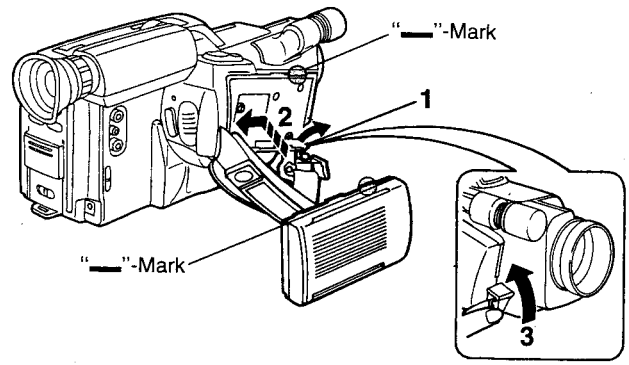
•Charging Indicator Lamps

Lit	The Battery Pack is being charged.
Not lit	Charging has been completed.
Flashing	The Battery Pack is in the waiting condition for charging.

Note:

- The Charging takes about 90 minutes.
- The Movie Camera can be used continuously for approx. 60 minutes with a fully charged Battery Pack.
- When charging the 2 Battery Packs simultaneously, one charging indicator lamp will be lit and the other one will be flashing. After the charging of the first Battery Pack is completed, the second one will be charged.

Attaching



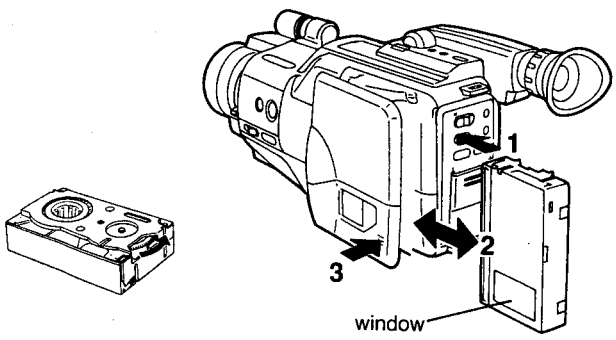
1 Pull the Battery Locking Lever forward and turn it down.

2 Align the "▬" marks and slide the Battery Pack backward (◀).

3 Hold the part of the Battery Locking Lever where the belt is attached and turn it up until it locks with a click.

Caution:

- Wait about 10 seconds after turning the Movie Camera off, before removing the Battery Pack.
- If the Battery Pack is removed during recording or playback, the tape remains wound around the video head cylinder and could become damaged.



Inserting the Video Cassette

Before Inserting the Cassette

Make sure that the tape is not loose, If it is loose, pull it in by turning the cog wheel on the side of the cassette in the direction of the arrow.

1 Press the Eject Button.

2 Insert the video cassette into the cassette compartment with its window facing outside.

3 Push the cassette compartment cover inward, until it locks with a click.

Removing a Video Cassette

1 Press the Eject Button.

2 Pull out the video cassette.

3 Push the cassette compartment cover inward, until it locks with a click, to close the cassette compartment.

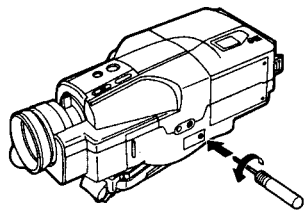
Note:

- Use S-VHS-C/VHS-C video cassettes only.

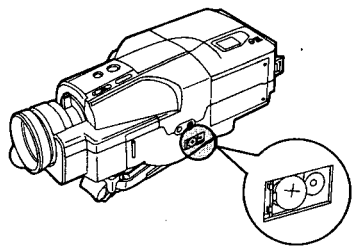
Setting the Clock

How to Insert the Battery for the Clock Operation

1 Remove the lid.



2 Insert the "LR1130" size battery with polarities (+ and −) aligned correctly and then replace the lid.



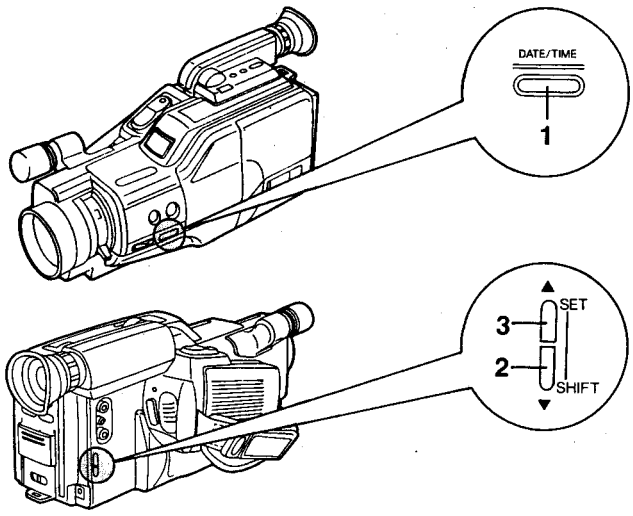
Note:

- This battery is necessary for the Date/Time Mode to be memorized by the Movie Camera.
- If the battery is not inserted or if it is exhausted, the indication "PLEASE SET BATTERY" will appear.
- When replacing the battery while the Date/Time indications are still correct, connect the Movie Camera to the AC Adaptor for the duration of the battery replacement so that the time will remain unchanged.

CAUTION FOR BATTERY REPLACEMENT

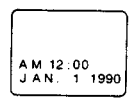
- The life of the battery is about one year. Inspect and if necessary, replace the Battery once a year.
- Load the new battery with its polarities (+ and −) aligned correctly.
- Remove spent battery immediately and dispose of it.
- Do not try to short-circuit, recharge or heat the battery and do not throw it into a fire.

Setting of the Date and Clock



1 When the Date/Time Selector Button is pushed, the indication shown on the right will appear in the EVF.

- If no battery is inserted, the indication "PLEASE SET BATTERY" in the EVE will light up.



2 When the Shift Button is kept pressed for more than about 2 seconds, the "Year" portion will start to flash. Then, at every press of the shift Button, the items to be set will flash in the following sequence.

Year→Month→Date→Hour→Minute→**Year**→...

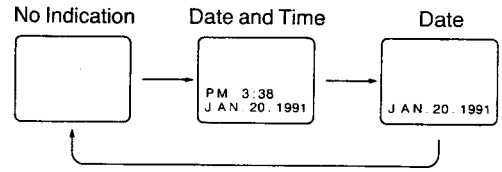
3 When the Set Button is pushed, the flashing portion displayed will be changed in the following sequence.

YEAR: **1990**→1991→ ..... →2089→**1990**→...
MONTH: **JAN**→FEB→ ..... →DEC→**JAN**→...
DATE: **1**→2→ ..... →31→**1**→...
HOUR: **AM12**→AM1→ ..... →PM11→**AM12**→...
MINUTE: **00**→01→ ..... →59→**00**→...

- Repeat procedures **2** and **3** until all items have been set.
- Once the time and date are set, press the Shift Button in response to a precise time signal so that the clock may begin to function.

Recording the Date/Time Indications

When the Date/Time Selector is pushed repeatedly, the indications will change in the following sequence:



Camera Recording

To Start Recording

1 Slide the Power On/Off Switch to the right to turn the Movie Camera on.

2 Set the Camera/VCR Selector cover to "CAMERA REC".

3 Insert a video cassette with the erasure prevention tab intact.
- After a few seconds, the Movie Camera will be in the recording pause mode.

4 Set the Recording Speed Selector to "SP" or "SLP".

5 Place the Movie Camera in the shooting position.

- Grasp the Handgrip.
- Adjust the length of the Grip Belt.
- Attach the lens Cap to the Grip Belt.

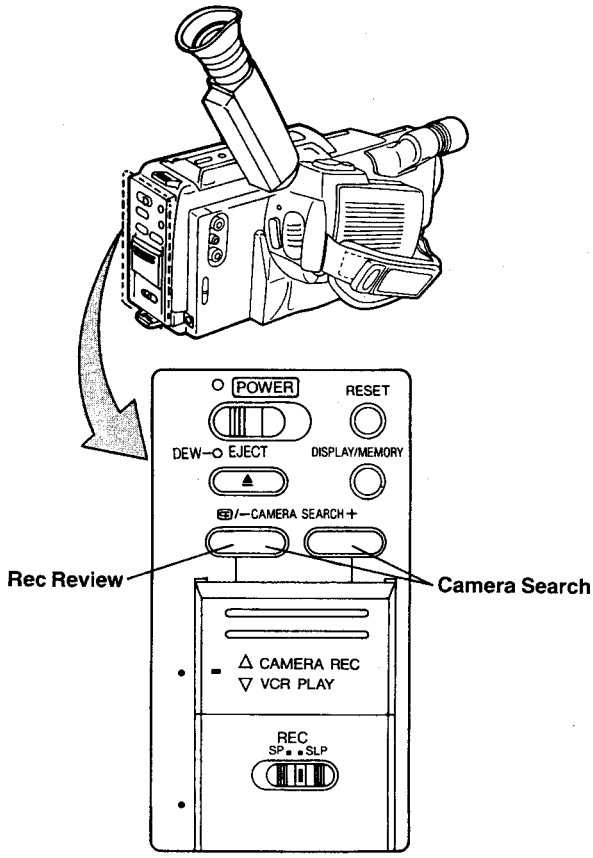
6 Press the Start/Stop Button.
- The recording starts.
- The Tally Indicator is lit.

7 Press the Start/Stop Button again to stop the recording temporarily. (Recording pause mode)

To Stop Recording

1 Put the Movie Camera in the recording pause mode.

2 Slide the Power On/Off Switch to the right again to turn the Movie Camera off.



Camera Search

For checking recorded scenes.

1 Put the Movie Camera in the recording pause mode.

2 Keep the Camera Search (−) Button pressed to play back a scene at high speed in reverse direction.

3 Keep the Camera Search (+) Button pressed to play back a scene at normal speed in forward direction.
- The sound is not reproduced.

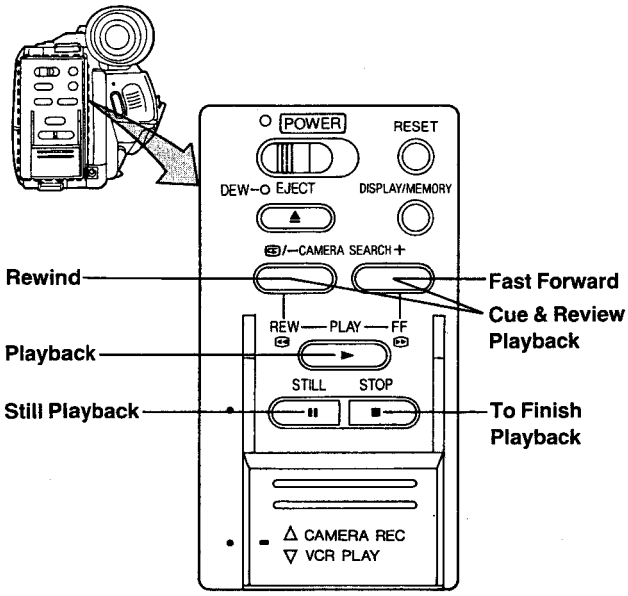
Rec Review

For checking the last few seconds of recorded scenes.

1 Put the Movie Camera in the recording pause mode.

2 Press the Rec Review Button.

Playback



Preparation

- Slide the Power On/Off Switch to the right.
- Insert the recorded cassette.
- Set the Camera/VCR Selector to "VCR PLAY".

Operations

1. Playback: Press the Play Button.
2. Cue playback: Keep the ⏩/FF Button pressed during playback.
3. Review playback: Keep the REW/⏪ Button pressed during playback.
4. Still playback: Press the Still Button during playback.
   - To return to normal playback, press this button again.
5. Press the Stop Button to finish playback.

Fast Forward

Press the ⏩/FF Button to rapidly wind the tape forward.

Rewind

Press the REW/⏪ Button to rapidly rewind the tape.

Tracking Control

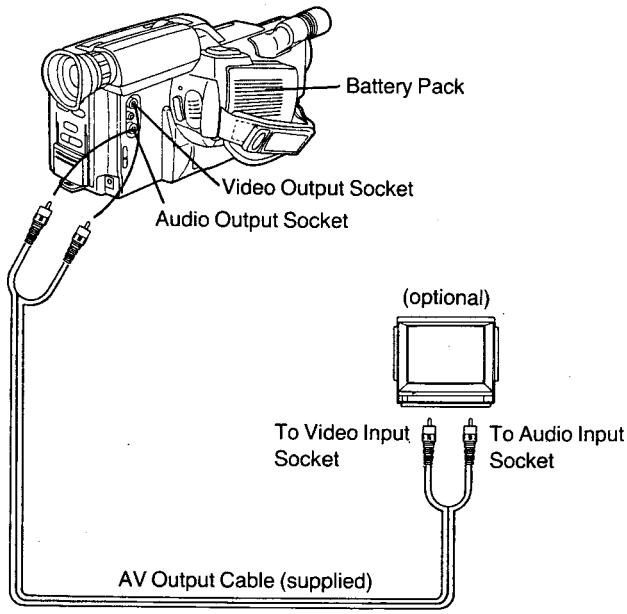
1. Press both the Tracking ◀ and ▶ Buttons simultaneously.
2. Adjust the Tracking with the Tracking ◀ or ▶ Button.

Note:

- The sound will be played back only during normal playback.
- Playback: The tape will be rewound automatically when it reaches its end.
- Fast Forward: The tape will stop automatically when it reaches its end.
- Rewind: The tape will stop automatically when it reaches its beginning.
- Still Playback: If the Movie Camera is left in this mode for about 5 minutes, it will switch over to the stop mode, to protect the tape and video heads.

Playback via TV Set (Connections)

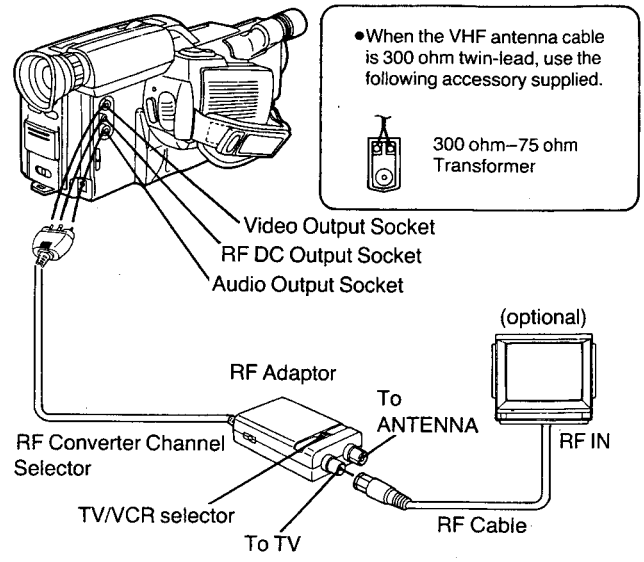
TV Set with AV Socket



Playback on a table Type VTR

Use the Cassette Adaptor.

TV Set without AV Socket

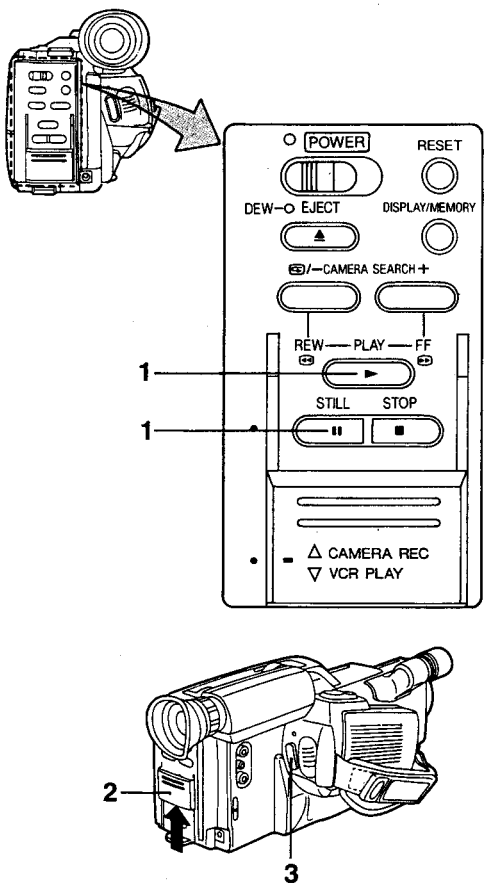


TV
Tune to VHF channel 3 or 4.

TV/VCR Selector on the RF Adaptor
VCR: For playing back a cassette
TV: For watching TV.

RF Converter Channel Selector
Set to channel 3 or 4, whichever is not used in your area.

Assemble Editing



Preparation

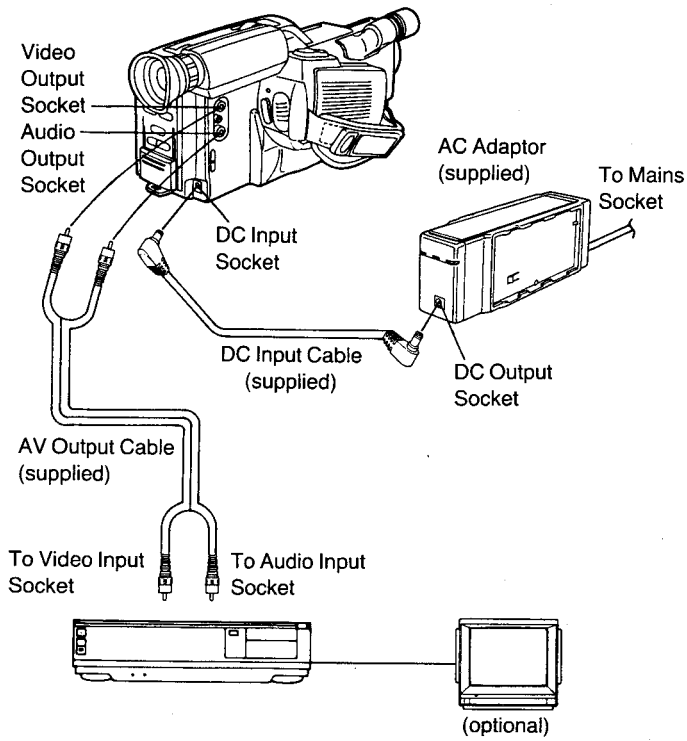
- Insert a video cassette with intact erasure prevention tab.
- Set the Camera/VCR Selector Cover to "VCR PLAY".

Operation

1. Play back the tape to locate the point where the new recording is to be joined (Assemble Editing), and press the Still Button at the desired point.
2. Set the Camera/VCR Selector Cover to "CAMERA REC".
3. Press the Start/Stop Button to start shooting the new scene.

Dubbing (Copying)

For Playback



For Recording

Operation

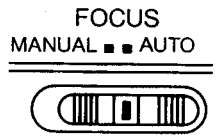
1 Press the Play Button on the Movie Camera to start playback.

2 Press the Record Button on the VTR to start recording.

Note:
The picture quality of a copied tape is inferior to that of the original tape.

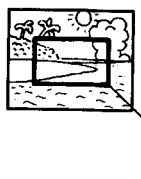
Focus

Auto Focus



1 Slide the Focus Mode Selector to "AUTO".

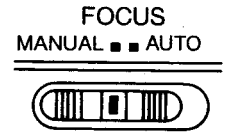
2 Aim the Movie Camera at the subject.
- The focus will automatically be adjusted to the subject within the focusing zone.



- The focus will automatically be adjusted to the object within the focusing zone.

Note:
See page 35 for details.

Manual Focus

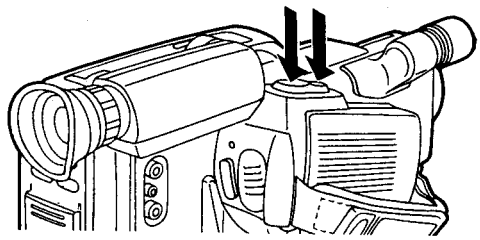


1 Slide the Focus Mode Selector to "MANUAL".

2 Turn the Focus Ring.

Zooming

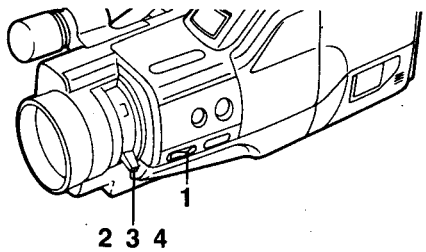
Power Zooming



For wide-angle: Press the "W" Button.
For telephoto: Press the "T" Button.

Macro Close-Up

For shooting small subjects or photos.



1 Slide the Focus mode selector to "MANUAL".

2 Turn the Zoom Lever all the way down to the click stop.

3 Press the Macro Button and turn the Zoom Lever further down.

4 Turn the Zoom Lever slowly and focus on the subject.

Fade-In and Fade-Out

Fade-out: Keep the button pressed.
Fade-in: Release the button.

High Speed Shutter

The Movie Camera has 3 different shutter speeds:

1/60 s normal shutter speed

1/500 s electronic high speed shutter

1/1000 s electronic high speed shutter

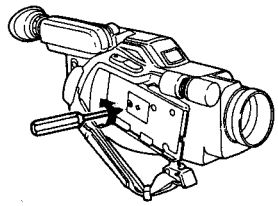
By repeatedly pushing the High Speed Shutter Selector, the shutter speed can be changed as follows:
1/500 sec.→1/1000 sec.→Normal

For videographing of fast movements, the shutter speed can be set to 1/500 or 1/1000 with the switch HIGH SPEED SHUTTER.

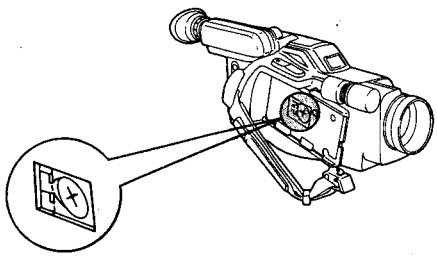
With a video recorder equipped with the playback functions, super still playback, super still advance and super fine slow motion, sharp-contoured pictures can be played back in these functions.

How to Insert the Battery for the Title Function

1 Remove the lid.



2 Insert the "CR2025" size battery with polarities (+ and −) aligned correctly and then replace the lid.



Note:

- This battery is necessary for the Title mode to be memorized by the Movie Camera.
- If the battery is not inserted or if it is exhausted, the indication "T. BATT" in the EVF will flash for approximately 10 seconds when turning the Movie Camera on.

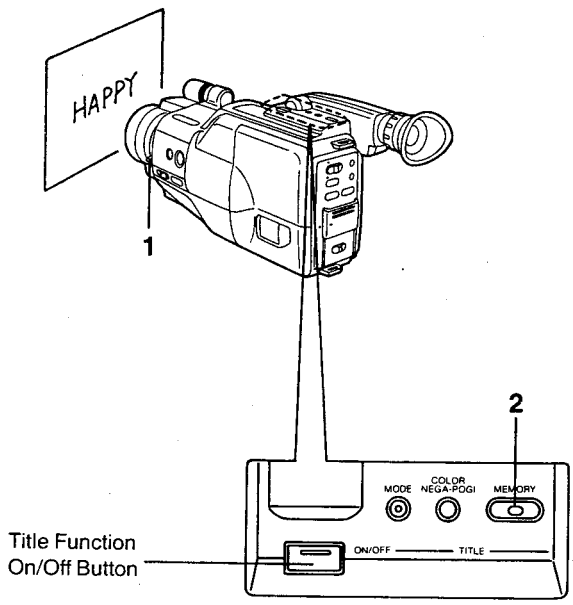
CAUTION FOR BATTERY REPLACEMENT

- The life of the battery is about one year. Inspect and if necessary, replace the Battery once a year.
- Load the new battery with its polarities (+ and −) aligned correctly.
- Remove spent battery immediately and dispose of it.
- Do not try to short-circuit, recharge or heat the battery and do not throw it into a fire.

The titling function makes it possible to input a title into memory and recall it later during shooting at the push of a button for superimposition onto the normal picture (Digital Title Memory Function).

Inputting a Title into Memory

This operation can be performed while the Movie Camera is in the recording pause or stop mode.



1 Use the Macro function to adjust the focus when shooting a small written, printed or painted title.

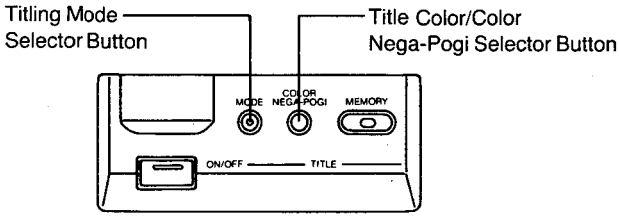
2 Press the Memory Button.
- Keep the button pressed for more than half a second. The title is memorized.
- While the title is displayed in the EVF, its color and the titling mode (the way it will be superimposed) can be selected. (See next page for details.)
- Press the Title Function On/Off Button to erase memorized titles.

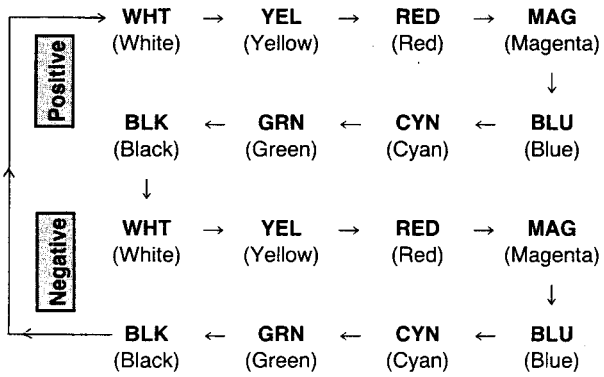
■ Remarks about Titling

The title remains stored in memory until the lithium battery is exhausted. When a new title is input, the title previously memorized will be erased.

Selecting the Color of a Title

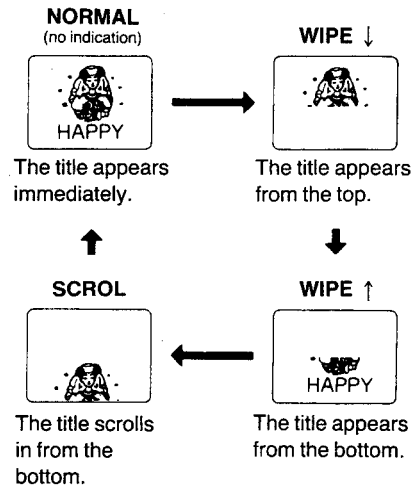
By repeatedly pressing the Title Color/Color Nega-Pogi Selector Button, the color of the title can be changed in the following order. (This function can also be used while the title is being recorded.)




Positive
WHT (White) → YEL (Yellow) → RED (Red) → MAG (Magenta)
BLK (Black) ← GRN (Green) ← CYN (Cyan) ← BLU (Blue)
Negative
WHT (White) → YEL (Yellow) → RED (Red) → MAG (Magenta)
BLK (Black) ← GRN (Green) ← CYN (Cyan) ← BLU (Blue)

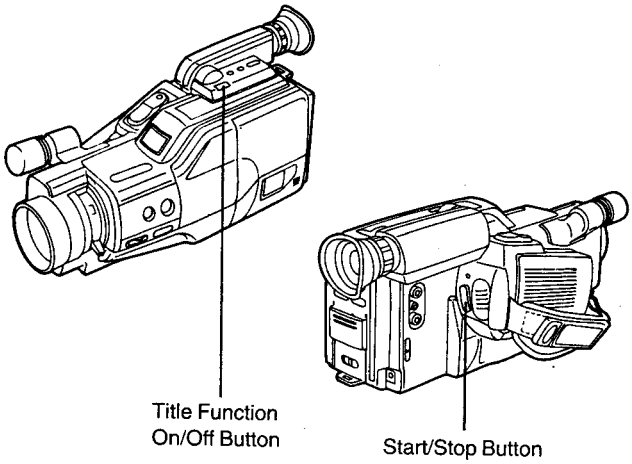
Selecting the Titling Mode

By repeatedly pressing the Title Mode Selector Button, the way in which the title is superimposed onto the picture being recorded can be changed in the following order. (This function can also be used while the title is being recorded.)



When pressing the Title Function On/Off Button, the Title is indicated in the selected mode.

Recording a Title



■ Inserting a Title in the Normal Titling Mode at the Beginning of a Recording

1 Press the Title Function On/Off Button to make the title appear in the EVF.

2 Press the Start/Stop Button to start shooting.
- To stop the superimposition of the title, press the Title Function On/Off Button again.

■ Inserting a Title in the Normal Titling Mode during Recording

1 Press the Start/Stop Button to start shooting.

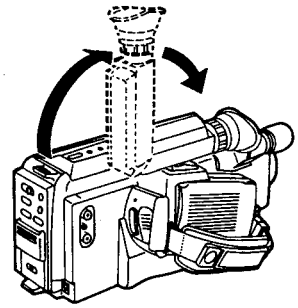
2 At the point where you want to insert the title, press the Title Function On/Off Button. (The superimposed title can be seen in the EVF.)
- To stop the superimposition of the title, press the Title Function On/Off Button again.

■ Inserting a Title in the Scroll or Wipe Mode at the Beginning of a Recording

After pressing the Start-/Stop Button, wait approx. 2 seconds and then press the Title Function On/Off Button.

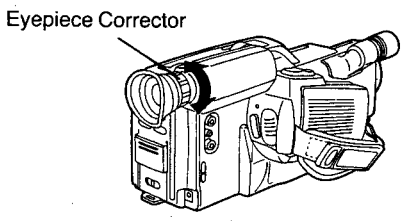
For Low-angle Shots

The Electronic Viewfinder can be turned upward and forward by a maximum of 180°. This is convenient for taking low-angle shots.



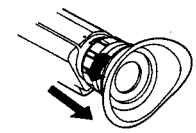
Eyepiece Corrector

This control makes it possible for people who wear glasses to adjust the eyepiece to their eyesight.

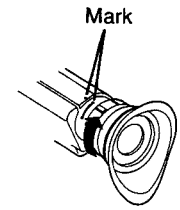


For Viewing the EVF with the Left Eye

- Turn the Eyecap counterclockwise to remove it.



- Turn the Eyecap so that its longer side faces left. Align the marks, and insert and turn the Eyecap clockwise until it locks with a click.



Recording Speed Selector

- **SP:** For normal tape speed
- **SLP:** For slow tape speed

Memory Search Function

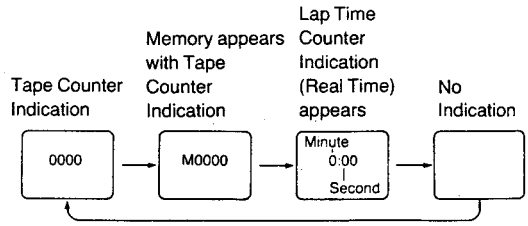
1 Press the Reset Button at the desired point.
- The Tape Counter is reset to "0000".

2 Press the Display/Memory Button.
- The "M" indication appears in the EVF.

3 After pressing the Stop Button, press the Rewind/Review Button.
- The tape will stop automatically at about the point where the tape counter reads "0000".
- To delate the counter indication, press the DISPLAY/ MEMORY Button 2 times.

Counter Indication

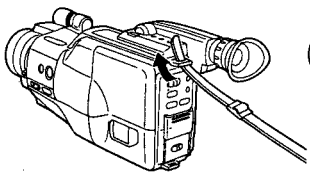
At every push of the Display/Memory Button, the counter indication changes in the following sequence.



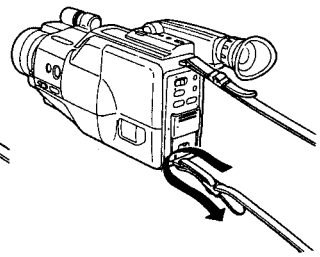
- The indication of the Lap Time Counter counts up only during recording.

Shoulder Strap

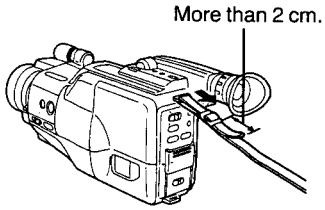
1



3



2



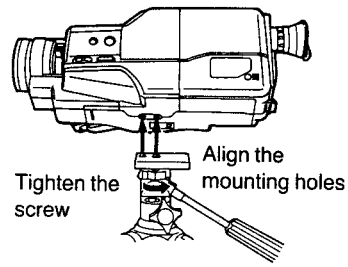
1 Pull the end of the Shoulder Strap through the slit of the upper Shoulder Strap Holder.

2 Securely attach the end of the strap.

3 Attach the other end of the Shoulder Strap at the lower holder in the same way as mentioned above.

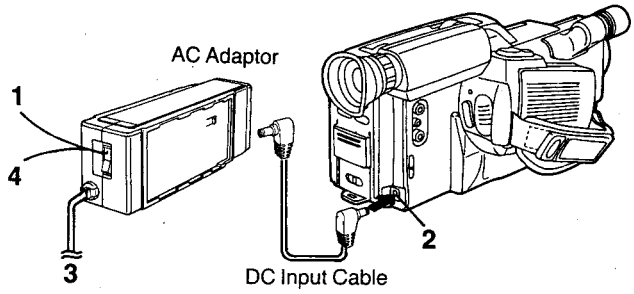
Tripod Mount

Bottom side of the Movie Camera



- Place the tripod on a stable surface, with its legs fully spread.

AC Adaptor



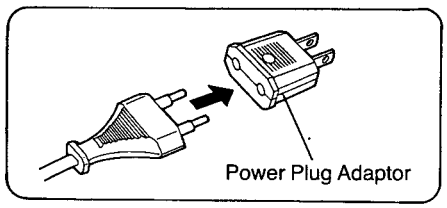
1 Turn off the power.

2 Connect the DC Input cable from the DC Output Socket on the AC Adaptor to the DC Input Socket on the Movie Camera.

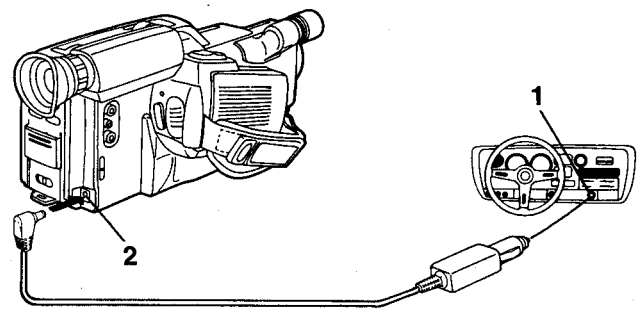
3 Connect to the Mains.

4 Turn on the Power.

Note:
When a Battery Pack is attached to the AC Adaptor, the Movie Camera cannot be supplied with power.



Car Battery Cord



1 Start the engine and insert the Car Battery Cord into the cigarette lighter socket.

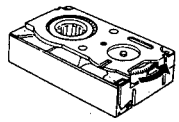
2 Connect the other end to the DC Input Socket on the Movie Camera.

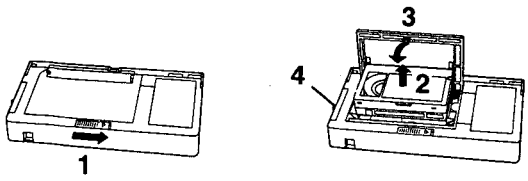
Note:
- The Car Battery Cord can only be used with 12 V DC negative-grounded vehicles.
- Do not start the car engine while the Movie Camera is powered by the car battery.

Cassette Adaptor

Loading the Cassette

Before loading the cassette into the Cassette Adaptor, turn the cog wheel in the direction of the arrow to pull in the slack of the tape.





1 Slide the Open Button in the direction of the arrow, and the Compartment Cover will pop open.

2 Insert the Cassette vertically.

3 Close the Compartment Cover firmly.
(Tape loading starts automatically. During loading, do not touch the rotating part on the underside of the Cassette Adaptor.)

4 The Stopper is retracted.
(When the Stopper is completely retracted, the tape loading in the Cassette Adaptor is completed. It can now be inserted into a VHS video recorder.)

Taking Out the Cassette

1 Slide the Open Button in the direction of the arrow.

2 Take out the cassette.
- Pushing the cassette from the underside of the adaptor will make it easier to take it out.

3 Close the Compartment Cover.

How to Load the Battery

1 Slide the Battery Cover upward and remove it.

2 Load one "R6" size battery with the polarities correctly aligned and replace the cover by pushing it down until it locks with a click.

CAUTION FOR BATTERY REPLACEMENT
- If the tape loading time is getting longer, the battery is becoming exhausted. Replace it with a new one.
- Load the new battery with its polarities (+ and −) aligned correctly.
- Remove battery immediately and dispose of it.

Cautions

Please read these cautions before operating the System.

Video Head Clogging

The video heads are the means by which the System places picture signals on the tape during recording, and reads picture signals from the tape during playback. If these heads become dirty and clogged from long use, the signals can no longer be recorded correctly, and the playback picture will be distorted accordingly. This is the case, for example, during the playback of a tape, the sound of which is reproduced normally, but no picture is seen, or the picture is greatly distorted. When such symptoms occur, have the System checked by qualified service personnel.
The System is equipped with head clogging detection function. When the heads are clogged, the ⊗ Indication in the EVF will appear. As the accumulation of dirt on the heads may be dislodged by the movement of the tape, it is possible that this indication sometimes appears, but may not reappear on the next recording starts.
The head clogging detection function will be activated when the shooting is started from the recording pause mode. However, it will not be activated when shooting immediately after replacing the cassette and after performing Camera Search or Playback.

If Condensation Forms Inside the Movie Camera

Condensation (dew) forms when warm air comes in contact with a cold object, for example on a window in a heated room in winter. Condensation may form in the Movie Camera and damage the tape and the video heads, if:

- The System is in a room where the heater has just been turned on.
- The System is in a room with steam or high humidity.
- The System is brought from cold surroundings into a well-heated room.
- The System is suddenly brought from cool surroundings, such as an air-conditioned room or car, to a place which is hot and humid.
- When condensation has formed inside the System, the "DEW" indication in the EVF and the Dew Indication Lamp located on the panel with the General Operation Controls will both flash. A few seconds later, the unit will turn itself off to protect the tape and the video heads.
  After a while, turn the unit on again and make sure that the Dew Mark is not displayed any more. Then, wait about 1 hour before operating the System again. Depending on the surrounding conditions, it may take several hours before the System can be used again.
- As condensation forms gradually, it may take about 10–15 minutes before the System turns itself off after a change of working environment.
- In an extremely cold place, condensation may freeze and turn into frost. In this case, it may take quite some time for the frost to melt, turn into dew and evaporate.
- When you bring the System from a very cold place, e.g. the ski slopes, into a heated room, keep it in a tightly closed plastic bag or similar to prevent condensation from forming inside the System.

Keep the System away from Oily Smoke and Steam

Protect the System from Humidity and dust

Surrounding Conditions

Use the System under conditions where the temperatures are between 0°C and 40°C, and where the humidity is between 20% and 80%. To avoid deformation of the outer case or other damage, do not leave it exposed to direct sunlight for any length of time, also never leave it in a closed automobile.

Keep the System away from Heaters

Keep the System away from TV Sets

Do not place the System near a TV set because it might impair the picture and sound quality of the recorded tape, and/or adversely affect the performance of the system.

Keep Magnets Away

Never bring a magnet or magnetized object such as fluorescent lamps, motors, electric clocks and battery operated toys etc. close to the System.

Keep the System away from Areas with Strong Electric Fields

The picture may become distorted, when the System is used in places with strong electric fields, such as near TV or radio antennas.

Never Put any Objects Inside

Never insert any object other than a video cassette into the System. If any object is dropped into it or if any liquid is spilled into it, consult qualified service personnel. Operating it with some foreign matter inside may cause fire or electric shock.

Not Fingers Inside

Touching internal parts of the System is very dangerous and may cause serious damage to the System. Do not attempt to disassemble it. For internal inspection, adjustment or repairs, consult qualified service personnel.

Handle with Care

Never drop the System or expose it to strong physical shocks. Shocks during use may result in abnormal operation and performance.

Appearance of Smear Distortion

Smear distortion is a peculiar characteristic of the CCD device. It appears as a bright vertical stripe on the screen when the System is aimed at spot lights or other bright light and light reflecting objects. To avoid this problem, make sure not to aim the System at such strong light source during shooting.

Cover the Lens with the Cap after Shooting

Keep the System away from Strong light

Do not expose the System to strong light, because the heat from it may cause deformation or other damage.

When the System Is Not Being Used

Remove the video cassette and turn the System off with the Power On/Off Switch.

Never Place the System with the Cassette Compartment Side Facing Down

Never use the System with the cassette compartment facing down as this might cause uneven winding and slacking of the tape.

Cleaning the VCR

Wipe the VCR with a clean, dry cloth. Never use cleaning fluid, or other chemicals.

- Clean the lens only with a blower brush (used for photo cameras) or a special lens cleaning tissue (used for glasses and cameras).

For Auto Focus

The Auto Focus System will not provide stable and accurate focus adjustment if you are shooting:

1. A subject behind dirty glass.
2. Shiny surfaces. (The focusing zone frame may disappear.)
3. A subject with a part of it near and another part far from the Movie Camera.
4. An oblique subject.
5. A subject with horizontal stripes.
6. A flat surface, e.g. a white wall.
7. With the macro close-up function, special lenses or filters.
8. A fast-moving subject.
9. A subject having a dark surface. (The focusing zone frame may go on and off.)

In these cases, use manual focusing.

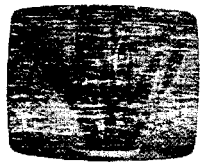
Note:
This Auto Focus System does not measure the actual distance but adjusts the lens to the optimum focusing condition based on the video signal. Therefore, the distance setting on the lens may be different from the actual distance in some cases. However, this is not an indication of a malfunction.

For High Speed Shutter

The following conditions are required for shooting with the High Speed Shutter function:

- The subject must be brightly lit, with little shade, under sunlight or some other illumination of more than 300 lux.
- If shooting under the illumination produced by fluorescent lamps, the picture will be adversely influenced by flickering.
- If the picture is played back in the normal playback mode, the movements may appear to be not very smooth.
- The playback picture will be slightly darker than the picture recorded without using the High Speed Shutter function.

Cleaning Care for Video Heads



Clogged Video Head

Video Head Cleaning: Your VHS Movie will not normally require head cleaning; however, it is possible that the heads may become clogged when playing an old or damaged tape. If the image on your screen resembles the photograph above, while playing back a tape, the heads may require cleaning.

Cleaning the Heads: To clean the heads, obtain a head cleaning cartridge. There are a wide range of cleaning cartridges, however, using a worn or poor quality cleaning cartridge will shorten head life. Be sure to follow the instructions that come with the cleaning cartridge, as excess use can shorten head life. It is recommended that the cleaning be done by a qualified technician, please contact your nearest Panasonic Service Center.

Before using video head cleaning tapes, please consult with Panasonic sales representative.

Power Source

- The power does not turn on.
  —Is the power supply unit correctly connected to the Movie Camera?
- The power turns on, but it turns off again immediately.
  —If the Battery Pack is exhausted, replace it with a fully charged one.
  —If condensation has formed, wait until it has dissolved.

Camera Recording

- The power is on, but no picture appears in the EVF.
  —Is the lens covered with the lens cap?
- Camera recording cannot be performed.
  —If the tab of the cassette is broken out, cover the tab hole with adhesive tape.
- The picture is not clear.
  —Is the eyepiece correctly adjusted to your eyesight?
  —Is the lens surface dusty?
- The Auto Focus System does not provide optimum focus adjustment.
  —Is the Focus Mode Selector set to "AUTO"?
  —For shooting conditions where the "AUTO" setting of the Focus Mode Selector cannot provide optimum focus adjustment, set the selector to "MANUAL" and adjust the focus.

Playback

- No playback picture is reproduced.
  —Is the connection to the TV set correct?
  —Is the TV set tuned to the video playback channel?
- The colors are not correct.
  —Is the color adjustment of the TV set correct?
- The playback picture is not in color.
  —Adjust the Tracking.
  —If the tape is old, use a new tape.

Specifications

NV-M400PX Information for your safety.

Power Source:	DC 9.6 V
Power Consumption:	8.7 W (Battery Operation)

Video Recording System:	8 Video heads, with Flying Erase Head		
Tape Format:	VHS-C tape		
Recording/Playback Time:	90 min. with NV-TC30SG (SLP MODE)		
VIDEO			
Television System:	EIA; 525 lines, 60 fields NTSC color signal		
Modulation System:	Luminance; FM azimuth recording Color signal; Converted subcarrier phase shift recording		
Output Level:	VIDEO OUT;	1.0 Vp-p,	75 ohm unbalanced
AUDIO			
Output Level:	AUDIO OUT;	−8 dB,	600 ohm unbalanced
Audio Track:	1 track (MONO)		
Image Sensor:	½-inch CCD Image Sensor		
Lens:	6:1 Power Zoom Lens with MACRO Function F1.2 (9–54 mm) Piezo Auto Focus System Auto Iris Lens Front Diameter 49 mm		

Viewfinder:	0.7 inch Electronic Viewfinder
Standard Illumination:	1,400 lux
Minimum Required Illumination:	4 Lux
Video Horizontal Resolution:	Color; More than 250 lines
Audio Frequency Response:	SP; 150–8,000 Hz
Signal-to Noise Ratio:	Video; More than 40 dB Audio; More than 41 dB
Operating Temperature:	0°C–40°C
Operating Humidity:	10%–80%
Weight:	Approx. 1.3 kg (without Battery Pack)
Dimensions:	124.0 (W)×139.3 (H)×328.0 (D) mm (with Viewfinder turned down)

VW-AMC2E Information for your safety.

Power Source:	AC 100–240 V, 50–60 Hz (Automatic voltage adjustment)
Power Consumption:	25 W
DC Output:	DC 9.6 V 1.2 A (VHS-C Movie) DC 9.6 V 0.86 A (Battery Pack charging)
Weight:	Approx. 0.56 kg
Dimensions:	53 (W)×68.5 (H)×191 (D) mm

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.